DOCUMENT RESUME

ED 036 761 AC 006 567

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TITLE Consideration of How Levels of Achievement and Anxiety toward Education Affect Older People's Participation in Adult Education Programs.
PUB DATE Feb 70
NOTE 20p.; Paper presented at the Adult Education Research Conference, Minneapolis, Minnesota, February 27-28, 1970

EDRS PRICE EDRS Price MF-$0.25 HC-$1.10
DESCRIPTORS *Adult Education, *Anxiety, Educational Background, Females, Income, Investigations, Males, *Older Adults, *Participation, Research, Self Concept, *Socioeconomic Status

ABSTRACT

Using a sample of 250 adults aged 65 or over (in Quincy, Massachusetts), this study investigated the relation of educational participation by older adults to socioeconomic achievement and to anxiety as regards education. Achievement was based on levels of occupation, income, and education. A series of 17 questions covered peer relationships, determination of ability to learn, critical incidents in one's education, and other aspects of anxiety. Achievement correlated positively, and anxiety negatively, with levels of participation. Anxiety toward continuing education stemmed, not from the aging process as such, but from previous educational experiences. Men were more anxious over competition than were women. Participants retained a relatively high self-image of learning ability and generalized their belief to the total elderly population, while nonparticipants were highly selective and unwilling to generalize. Nonparticipants considered student evaluation necessary but would not participate in programs using it. Participants considered evaluation unnecessary but would not hesitate to participate if it were included. (author/ly)

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CONSIDERATION OF HOW LEVELS OF ACHIEVEMENT AND ANXIETY TOWARD EDUCATION AFFECT OLDER PEOPLE'S PARTICIPATION IN ADULT EDUCATION PROGRAMS.

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Boston, Massachusetts
February, 1970

It is becoming a matter of common knowledge that large numbers of people in the United States are living longer, retiring younger, and discharging family obligations earlier than their forefathers. The population of people 65 years of age and older has multiplied in the twentieth century from approximately 3.3 million in 1900 to an estimated 32.2 million by the year 2000.

With the passage of the Social Security Act in 1935, 65 became the legally acceptable age for retirement. This also became the point, via the same legislation, where the employee constituted an undesirable element in the labor force.

At the same time, medical science has been making significant advances in extending the physical fitness of the older person. At the age of 65, the average person can expect to live 14 years. Half of these retired individuals will live longer - up to 30 or 35 years longer.

In recent years, there has been an increasing amount of attention devoted to the problems of aging. While the major thrusts have originally been in the areas of meeting health and physical needs, there is a growing concern for the psychological needs of the aging. Opsimathy is one technique for meeting these psychological needs.

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This paper is concerned with (1) anxiety toward education (i.e., an individual's specific anxiety toward re-entry into an educational milieu), and (2) achievement (i.e., an individual's degree of success in our society - relating to a combined score of education, occupation and monetary achievement.)

The hypothesis tested is as follows: The extent to which participation by older adults in adult education programs may be correlated with levels of achievement and anxiety toward education.

(a) As the level of achievement increases, or the level of anxiety toward education declines, participation rises.

(b) As the level of achievement decreases, or the level of anxiety toward education increases, participation declines.

Previous Research

There have been a number of related studies on education for the aging. In a cross-sectional study on the learning ability of adults, Conrad and Jones' findings indicated that there was a gradual decline in the ability to learn after the age of 30. Similarly, Thorndike's work in the field substantiated that the peak years of learning ability appeared to be from ages 20 to 30, and thereafter a slow, steady descent was exhibited.

Bowles and Rayburn's longitudinal study agreed with Conrad and Jones' work that there was a decline in learning ability with age, but it differed with the individual. They discovered that people with high intelligence did not begin this decline until their late 70's. Those with normal intelligence began the decline in their late 50's. People with subnormal intelligence, however, started their decline as early as age 14.

Welford stated that apparent difficulty in learning by older people was not due to any trueincapacity of learning or recall as such, but inability to comprehend the material or deal with conditions under which it was presented. These conditions mainly involved speeded and paced tasks which allow the individual little opportunity to rehearse or examine the material.

Lorge attributed the decline in rate of learning to losses in visual acuity, auditory acuity and reaction time. He also referred to the additional factors of increased fear of failure and a different attitude that older people have toward learning.

Granick and Friedman found that when the factor of negative correlation of education within the adult population is controlled, much of the apparent decline in intellectual functioning with old age is reduced and, in some instances, eliminated.

Knox and Sherburn, using pre-post tests, found that

age was not a significant factor in learning. They tested subjects of various ages both before and after participation in educational programs. Their study indicated that the predominant factors included level of participation in adult education programs and the length of time since previous participation in an adult education program. Their conclusions show that age is not a primary factor in learning ability.

Rose reported on class differences among the aging. Middle class respondents felt in better health, were happier, had fewer disrupted relationships and personal problems than other classes. They participated more in voluntary associations and voting, and had more religious and family life than those in the lower class bracket.

Tuckman studied older people's judgment of the passage of time over the life span. His conclusion was that activity and inactivity constituted the variable which affected the rank ordering.

Research Design - Data Collection

Once again, this study demonstrates the difficulties of conducting a random sampling of elderly subjects. Of the 525 residents over 65 years of age in Quincy, Massachusetts, who were initially contacted, only 250 eventually participated in this program. The level of participation and the length of time necessary to gain such participation proved that the

the original estimate of 400 participants and three weeks of sampling was totally unrealistic.

Anticipating a degree of reluctance to participate by the elderly population, an extensive public relations campaign was conducted for one week prior to and one week after the first mailing of the questionnaire. Endorsement by the Quincy Council on Aging provided an excellent base for gaining cooperation of the local news media. In addition, I personally spoke at many of the organizations for the elderly during their monthly meetings.

The original design for the study anticipated a total response from 400 subjects. The first mailing was followed by two further mailings, originally estimated to elicit a total of 355 responses. An additional 45 subjects, it was felt, would have to be contacted in person.

The optimism of this design became evident the day after the study was implemented. Seventeen questionnaires were returned, 16 of them blank. In all, 87 subjects responded with completed questionnaires in the first mailing, 113 less than initially estimated.

Fortunately, agencies working with the elderly provided strong support. Case workers in welfare, public health, and the aging contacted subjects served by them. Subjects living in elderly housing facilities, low and middle income, were reminded of the study and given another copy of the questionnaire, when necessary, at the time they paid their rent. Subjects belonging to clubs and educational and recreational programs

were also encouraged to participate.

The emphasis was to contact and persuade the subjects to participate by utilizing established channels of communication whenever possible. Despite these efforts, it became increasingly evident that many subjects were unwilling to participate in the study. As efforts to gain participation from the non-participants, the number of letters and telephone calls to me increased. Many identified themselves, but others would not. One woman, for example, demanded how I knew she was over 65. She indicated extreme anxiety concerning the whole experience. It seems the problem was her husband was 63, and when they married 37 years ago, she told him she was a year younger than he.

Another man wrote the following letter concerning the study:

> Dear Sir:
>
> I would like to know what all these questions have to do with older people's participation in educational programs. I think that it is all poppycock. Why should you want someone's history? Where would it end up? I do not wonder that students revolt when I get six pages of such stuff to see if older folks want more education. What researchers need is more common sense. I am 84 and my answer is nuts.
>
> Very truly yours.

A secondary study was instituted to identify non-participation of the elderly in research programs. As a result,

a total of 424 subjects (80.8%) did participate in either the primary or secondary study. Of the original 525 subjects, 16% refused to participate and gave no reason for non-participation, and 3.2% could not be located.

Those participating in the primary study included 92 men and 148 women, ranging in age from 65 to 96. Educationally, the group was quite varied, but tended toward higher than national average, the medium educational level being equivalent to a high school graduate. This is consistent, however, with the medium of 12.1 years of education for the Greater Boston area. Approximately 80% reported a preretirement income of under $5,000 a year. Half the subjects were married and living with their spouses. 32% were widowed, and 14% had never married. With regard to mobility of the sample, 56% were born in the Greater Boston area, 38% were born in the United States, and 6% were of foreign origin.

Development of Instrument

In building an instrument to measure levels of achievement and anxiety toward education as they affect participation by the aging in adult education programs, a number of unique problems arose.

Investigation of Buros, Psychological Abstracts, Journal of Abnormal and Social Psychology, Journal of Experimental Psychology, and Dissertation Abstracts revealed no standardized psychological tests relating to specific anxieties of people over 65 toward education. Personal visits to and discussions with members of the staff at Brandeis University's Florence Heller Graduate School, Boston University's Psychology Department, University of Rhode Island's Program in Gerontology, and The Age Center of New England confirmed the dearth of such material. The Taylor Manifest Anxiety Scale, the Minnesota Multiphasic Personality Inventory scale on anxiety, and similar tests which include anxiety scales, were probed to determine their effectiveness in measuring specific anxiety toward education.

Investigation of physical tests to observe specific anxiety, particularly in the area of galvanic skin response, showed that the equipment and procedures necessary for reliability in conducting such tests induced a high level of anxiety in the aging subject, even to the point that potential subjects refused to consider participation in a pre-test.

A series of questions concerning anxiety toward education was developed, using Gallup's Quintamensional Plan of Question. The quintamensional design entails five categories

of questions. The first is designed to identify whether the respondent has given any attention or thought to the issue involved. The second is an open or free answer allowing the respondent to prove his familiarity with the issues under investigation. The third is dichotomous in nature. It reveals the direction of the respondent's thinking and also assists in the arrival of unstructured opinions of the person interviewed. The fourth identifies reasons why people hold certain views. The fifth is designed to measure the intensity of opinions held.

This series of questions was given to 31 male and female subjects over 65 years of age. Approximate time for completion was 47 minutes. Only six people answered all the questions. However, 30 people answered the dichotomous questions, and 18 responded to the dichotomous questions and short-answer interrogatories.

In a post-test conference, it was strongly suggested by the respondents that only dichotomous questions be utilized as they were easier to answer, not as personal in nature, and took less time to answer. Resentment was evident concerning questions which required a self-analysis of previous answers.

The anxiety scale was redesigned and retested with a group of 22 subjects. All but one answered every question. Approximate time for completion was 6 minutes. In a post-test meeting, the subjects indicated that the questions were simple.

The lone subject who did not complete the questions felt threatened by the entire experience.

Achievement motivation of the elderly was measured by the establishment of social stratification. Bernard Rosen's research supports the hypothesis that social strata from one group to another vary in degrees to which achievement motivation is characteristic of members. His recordings also indicate that middle class people have a considerably higher need achievement than individuals of lower social stratum.

A breakdown of achievement motivation by social class, from Rosen's study, is as follows:

	Social Class			
Achievement Motivation Score	Classes I and II	Class III	Class IV	Class V
High	83%	43%	30%	23%
Low	17%	57%	70%	73%

Blau and Dunion stated that social class may be defined in terms of economic resources and interests and that occupations provide the structure by which the individual acquires social mobility. This mobility, however, may well exceed any effect of manpower redistribution for technological advancement.

They add that class mobility results from:

(1) Improved education altering the quality of the manpower supply;

(2) Change in demand of future professional needs by men who acquired an awareness in their early environment of social skills and habits that are appropriate;

(3) Those who can afford to acquire the educational level required for professional status.

In substantiating levels of achievement, three primary inferences were considered. Hodge, Siegel and Rossi's Occupational Prestige in the United States rank orders the prestige rating of ninety occupations, having a 93 per cent correlation with the National Opinion Research Center's study of 1947.

An additional finding evidenced an appreciable overlapping in scores between professional, other white-collar and blue-collar occupations, and in fact no such barrier could be detected on the basis of occupational prestige. The traditional cleavage between white and blue collar workers is based not so much upon matters of social evaluation but upon character of dress and employment in the three groups.

In light of these findings and for the purpose of this study, the occupational list was separated into six categories of fifteen occupations each, disregarding the customary divisions of professional, white and blue collar workers.

The next area considered was income. The range identified income groups from under $1,000 to over $15,000, and was divided into seven categories. The third indicator of achievement was level of education, which was broken down into categories compatible with the United States Census of 1960. In addition, more refined measures were established with inclusion of other questions, such as one relating to the educational levels of spouse, parents and children. Questions, such as knowledge of adult education programs in the community, mode of transportation required to participate, and travel time necessary, were appended to determine if these affect participation.

The next instrument form consisted of a series of rank ordered, open-ended, true and false, and multiple-choice questions. A series of pre-tests were administered to a number of elderly people over a three-month period. Approximately 38.4 per cent of the open-ended questions were answered, whereas 79.1 per cent and 87.6 per cent of the multiple choice and true and false, respectively, were completed.

Discussion periods were held after each pre-test. The participants were asked for their reaction if they received

the document in the mail. Initial reaction was rather negative, principal objections being length, unwillingness to record income, and confusion as to how to answer rank order questions. Further examination revealed that the length of the questionnaire, as they defined it, was really the number of pages rather than the number of questions.

The instrument was thereafter designed to eliminate all rank order questions; the income question was coded into broader aspects; and several questions were consolidated into an activity section. The true and false educational anxiety queries were part of the revised questionnaire. This revised questionnaire was given in another pre-test. Each question was then scrutinized during the following discussion period. The opinion of the participants appeared to indicate the questionnaire as being moderately easy to complete, somewhat lengthy, but a challenging experience for the questionee.

Strength and Weakness

I originally perceived this study as only a first step in a series of research endeavors on the participation of adults in educational programs. It includes a number of compromises dictated by the available resources. Yet, it is possible to state that many of the strengths and weaknesses of the study are synonymous.

While this is the only study that has been done concerning achievement and anxiety toward education in relation to participation, the design in its present form is not applicable to the general population. Response to the survey proved to be demographically representative of the City of Quincy, Massachusetts, but it was not representative on a national basis. For a random survey of elderly, a response of 47.9% was phenomenonally high, but the large percentage of non-respondents required considerable hedging in the interpretation of data.

It is my hope that future studies will be far broader in scope, both as to the nature of the population studied and age and geographic location. In addition, consideration must be given to development of correlations in achievement and anxiety toward education with established instruments.

Findings

Participants in educational programs have a higher level of achievement and a lower level of anxiety toward education than non-participants.

Specific Findings of the Study

Participants rank correlation between achievement and number of times participated in adult education programs:

Kendall's tau	=	0.212
Standard Deviation	=	0.073
z score	=	2.890
Level of significance	=	.01

Participants rank correlation between anxiety and number of times participated in an adult education program:

Kendall's tau	=	-0.147
Standard Deviation	=	0.073
z score	=	-2.002
Level of significance	=	.05

Participants rank correlation between achievement and anxiety toward education:

Kendall's tau	=	-0.172
Standard Deviation	=	0.073
z score	=	-2.341
Level of significance	=	.05

Non-Participants rank correlation between achievement and anxiety toward education:

Kendall's tau	=	-0.144
Standard Deviation	=	0.059
z score	=	-2.445
Level of significance	=	.05

It should be noted that there is a similar inverse relationship between achievement and anxiety toward education for participants and non-participants. Level of significance of the resulting z scores in both instances was .05. However,

the mean of the participants in opsimathy achievement scores is 14.8, while for non-participants it is 11.5. Similarly, the mean of participants' anxiety toward education score is 8.6, and non-participants is 9.1. This mean difference indicates that while there is a similarity in rank order correlation, this study finds participants in opsimathy have a higher level of achievement and a lower level of anxiety toward education than non-participants.

Implications

While achievement is a cultural syndrome in our society the manner and level of achievement ultimately obtained by an individual is affected by further criteria. No effort is made to rank order these criteria for, indeed, the person's perception of their relative importance may change as they relate to current drives.

This study has shown, for example, a multigenerational correlation for educational achievement. Furthermore, of the 250 participants in this study, only one subject who had not completed high school reached either of the top two occupational status categories. Conversely, of the subjects sampled who completed college, all achieved an occupational status above the bottom three classifications.

It was further revealed that only three people classified in the top 25 percentile of achievemen.. rank had four or

more children. On the other hand, eleven people ranking in the lower 25 percentile had four or more children, and a total of eighteen ranked in the lower 50 percentile.

By the very nature of arriving at an achievement score for participants here, a correlation is demonstrated between levels of education, occupation and income. It can be theorized that certain environmental factors affect the subject's level of achievement. The expectation level of those who were high achievers as children did much to create an awareness of the opportunity to achieve in their offsprings. Building on the syndrome of destiny, the subculture in which they live continues to reenforce this high level of achievement awareness.

Thus begins the process of interrelationship of the individual to the social system. Awareness of opportunity to achieve results in increased achievement motivation and awareness of this by society provides early recognition of achievement. Early recognition enhances motivation and opportunity to achieve.

While such a cyclical action described in the preceding paragraphs is positive in nature, a similar model may be developed with a negative connotation, whereby lack of awareness or recognition of achievement would blunt achievement motivation. The path to high achievement is earier and shorter for those who are expected to achieve.

Anxiety on the part of the elderly toward continued participation in educational programs is not a phenomenon that has developed as a result of the aging process. Contrary to the theory of disengagement, this study indicates that anxiety toward education is a process which started with early childhood educational experiences. Non-participants felt relieved to terminate their formal schooling, indicating previous educational experiences as negative factors affecting current decisions concerning participation. As a result of this study, reenforcement of anxiety toward education during the subject's lifetime can be attributed to three factors:

(1) Current displays of anxiety toward education on the part of the subject's children and grandchildren;

(2) Society's use of level of education as a major criterion of evaluating the worth of an individual;

(3) Belief that their ability to learn deteriorates rapidly with age.

Anxiety concerning ability to learn is not an occurrence confined to the aging alone. Society's level of expectation for achievement in learning by youth, however, is a driving force which helps them overcome this roadblock. In addition, pedagogists have instituted a large number of services and techniques to provide further impetus for teaching the desired educational norm.

There are no positive socially or culturally defined

uniformities of expectation for the elderly. Few, if any, external driving forces aid the older person in overcoming anxiety concerning his ability to learn. No services are available to help the older individual maintain an educational norm. In fact, there is no norm.

Summary

In summarizing this study, there are several implications for researchers in the field of adult education.

1. The elderly in our society provide a researchable population that is not being effectively utilized. The Age Center of New England has shown in numerous studies the ability of the elderly to recall life experiences and their willingness to discuss emotional situations.

2. The utilization of multigenerational considerations provide an opportunity for longitudinal effects in short-term studies.

3. There should be a focusing of attention on the need to develop a series of instruments relating to specific anxieties, particularly anxiety toward education.

4. Achievement in this study was measured by combining income, occupation, and education. They are based on real accomplishments. This measure need not be limited to a segment of the population which is often considered terminal.

5. The need for broader geographical sampling is evident. May I suggest that it would be possible for several doctoral candidates to do separate but identical studies simultaneously?

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